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PATENT
Atty. Dkt. No. PU010152

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE
BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of: Yongmei Cang

Serial No.: 09/916,903

Confirmation No.: 8714

Filed: July 27, 2001

For: **METHOD AND SYSTEM FOR
CREATING A SUBSET OF
PROGRAMMING CHANNELS**

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Group Art Unit: 2623

Examiner: Scott E. Beliveau

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APPEAL BRIEF

Dear Sir:

Appellant submits this Appeal Brief to the Board of Patent Appeals and Interferences on appeal from the decision of the Examiner of Group Art Unit 2623 dated August 24, 2006, finally rejecting claims 1-17.



Table of Contents

<u>Appeal Brief Section</u>	<u>Page Number</u>
Real Party in interest	3
Related Appeals and Interferences	4
Status of Claims	5
Status of Amendments	6
Summary of Claimed Subject Matter	7
Grounds of Rejections to be Reviewed on Appeal	18
Argument	19
Conclusion	41
Claims Appendix	43
Evidence Appendix	48
Related Proceedings Appendix	49

Real Party in Interest

The real party in interest is Thomson Licensing.

Related Appeals and Interferences

Appellant asserts that no other appeals or interferences are known to the Appellant, the Appellant's legal representative, or assignee which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

Status of Claims

Claims 1-17 were originally presented with the filed application. Subsequently claims 1, 8, 10 and 16 were amended in an amendment submitted on November 23, 2005. Claims 1-17 stand finally rejected under 35 U.S.C. § 103(a) as being unpatentable over Elenbaas et al. (US Pub. No. 2005/0028194) in view of Barton (US Patent No. 6,233,389).

Status of Amendments

A first response was filed on November 23, 2005 to overcome a First Office Action dated August 25, 2005. In the First Office Action, the Examiner rejected the Appellant's claims 1-17 under 35 U.S.C. § 102(e) as being anticipated by Shintani (US Patent 6,137,546, hereinafter "Shintani"). In the response filed on November 23, 2005, the Appellant amended claims 1, 8, 10 and 16. The Appellant further set forth arguments traversing the rejections issued by the Examiner and distinguishing the Appellant's invention over the cited prior art.

A second response was filed on July 17, 2006 to overcome a Final Office Action dated May 05, 2006. In the Final Office Action, the Examiner rejected the Appellant's claims 1-17 under 35 U.S.C. § 103(a) as being unpatentable over Elenbaas et al. (US Pub. No. 2005/0028194) in view of Barton (US Patent No. 6,233,389). In the response filed on July 17, 2006, the Appellant set forth arguments traversing the rejections issued by the Examiner and distinguishing the Appellant's invention over the cited prior art.

The Examiner responded to the Appellant's response of July 17, 2006 with an Advisory Action dated July 26, 2006. In the Advisory Action, the Examiner reiterated the rejections of the Final Office Action and set forth rebuttals to the Appellant's reasoning for distinguishing the Appellant's invention over the cited prior art. In response to the Advisory Action, the Appellant filed a Request for Continued Examination on August 07, 2006 and a corresponding Preliminary Amendment setting forth arguments traversing the rejections issued by the Examiner in the Final Office Action and the Advisory Action and distinguishing the Appellant's invention over the cited prior art.

The Examiner responded to the Appellant's RCE and Preliminary Amendment with a first action Final Office Action dated August 24, 2006. In the Final Office Action, the Examiner reiterated the rejections of the previous Final Office Action and Advisory Action. In response to the first action Final Office Action dated August 24, 2006, the Appellant submitted a Notice of Appeal dated September 05, 2006.

The claims on appeal are those of the Appellant's response filed on November 23, 2005. That is, the claims on appeal are the Appellant's claims 1-17, which are listed in the attached Appendix.

Summary of Claimed Subject Matter

The invention of the Appellant provides a method and system of creating a subset of channels with programming from a plurality of channels. That is, a subset of channels with programming from a plurality of channels can be created thereby permitting a video system to skip automatically those channels that do not contain programming. An embodiment of a method of the Appellant's invention for creating a subset of channels with programming from a plurality of channels includes receiving a plurality of channels, the plurality of channels including at least one channel with programming, encoding at least a portion of a predetermined number of channels from the plurality of channels to provide corresponding encoded intra and/or non-intra pictures for each of the predetermined number of channels, processing at least one of the corresponding intra and/or non-intra pictures for each of the predetermined number of channels to determine which of the predetermined number of channels contain programming to provide the subset of channels with programming, and storing the subset of channels into a memory.

In an alternate embodiment, an embodiment of a system of the Appellant's invention for creating a subset of channel indicators for channels with programming from a plurality of channels includes a receiver for receiving a plurality of channels, where the plurality of channels includes at least one channel with programming. The system further includes a video processor programmed to encode at least a portion of a predetermined number of channels from the plurality of channels to provide corresponding encoded intra and/or non-intra pictures for each predetermined channel and to process at least one of the corresponding encoded intra and/or non-intra pictures for each of the predetermined number of channels to determine which of the predetermined number of channels contain programming to provide the subset of channel indicators. The system can further include a memory for storing the subset of channel indicators.

As suggested in MPEP 1206, the Appellant now reads at least two of the broadest appealed claims on the specification and on the drawings. It should be understood, however, that the appealed claims may read on other portions of the specification or other figures that are not listed below.

With regards to a first embodiment, the Appellant's Specification specifically refers to FIG. 1 for teaching an embodiment of a system 100 for implementing the various advanced operating features of the Appellant's inventive arrangements. With reference to FIG. 1, the Appellant teaches that a system 100 can include a receiver or set top box 112, a storage medium device 114 and a display device 122. The storage medium device 114 can include an encoder 116, memory 118, a microprocessor 120 and an audio detection circuit 124. The encoder 116 and the microprocessor 120 can be collectively referred to as a video processor 121. In addition, control and data interfaces can also be provided for permitting the microprocessor 120 to control the operation of the encoder 116, memory 118 and the audio detection circuit 124. In an alternative arrangement, the display device 122 can contain the encoder 116, memory 118, the microprocessor 120 and the audio detection circuit 124 thereby eliminating the use of the storage medium device 114.

The Appellant further teaches that as shown in FIG. 1, the set top box 112 can receive a digital DBS signal, such as a satellite or cable transmission, containing one or more broadcast channels. Generally, the set top box 112 converts the digital DBS signal into an analog signal and then transfers the analog signal to the storage medium device 114 (if the system 100 contains the storage medium device 114). Subsequently, the storage medium device 114 can then send the signal to the display device 122. The display device 122 can be any suitable device for displaying multimedia data contained in the DBS signal such as an analog or digital television. The Appellant notes that many of these channels, even though they have a broadcast signal, may not contain any programming. To clarify, the display obtained from these non-programming channels is referred to as still video patterns by the Appellant.

The Appellant recites that to eliminate the delay associated with browsing through the non-programming channels, the storage medium device 114 can process one or more of these channels to determine which of the incoming channels contains programming. In one arrangement, the encoder 114 can encode a portion of one or more of the incoming channels. Thus, an encoded signal can be created for one or more of these channels. The microprocessor 120 can then process a

portion of one or more of these encoded signals to determine which channels contain actual programming and which channels contain still video patterns. Once the microprocessor 120 determines that a particular channel contains programming, that channel number or channel indicator can be stored in memory 118, which can then be accessed by the display device 122. In addition, the Appellant teaches that the audio detection circuit 124 can determine whether any audio exists on a particular channel. Detecting audio can improve the accuracy of the system 100, as the channels that do not contain programming typically do not carry an audio signal. In an alternative arrangement, the audio detection circuit 124 can be used by itself to determine whether a channel contains programming.

Since the channels with programming can be stored in memory 118, the display device 122 is permitted to limit its display to only these channels, and channels with no programming can be automatically skipped. The Appellant further recites that suitable software or firmware can be provided in memory for the conventional operations performed by the microprocessor 120 and that program routines for creating a subset of programming channels in accordance with the inventive arrangements can be provided in memory for the microprocessor 120 as well. The Appellant teaches that in one arrangement, the microprocessor 120 and other relevant elements of the system 100 can be programmed to perform automatically the steps necessary for receiving, encoding, processing and storing into memory one or more DBS channels.

Furthermore, and with regards to at least a second embodiment of the Appellant's invention, the Appellant refers to FIG. 2. More specifically, the embodiment of FIG. 2 illustrates a flowchart 200 that demonstrates one way in which a subset of channels with programming can be created thereby permitting the automatic skipping of channels with no programming, which can include video, audio or a combination thereof. In a first step (step 210), a plurality of channels can be received. In one arrangement, these channels can be channels from a digital DBS signal such as a cable or satellite transmission; however, the invention is not so limited, as any other signal containing a plurality of channels in which the channels carry a broadcast signal and one or more of them may carry no programming can be received.

In a second step (step 212), a portion of a predetermined number of these plurality of channels can be encoded to provide a corresponding encoded signal for each of the predetermined channels. It should be noted that any number of the plurality of channels can be encoded, including all the plurality of channels. The Appellant teaches that in one arrangement, the encoding step can be performed by encoding a portion of each of the predetermined number of channels into MPEG formatted pictures such as intra (I) pictures or non-intra (non-I) pictures. Non-I pictures can include predictive (P) or bi-directional predictive (B) pictures. The encoded signals can contain any number of I or non-I pictures. In fact, the encoded signal can be limited to merely a single I picture, a single I picture and a single non-I picture or a single non-I picture such as a P picture that contains a number of I macroblocks.

In a third step (step 214), each of the encoded signals can be processed to determine which of the predetermined number of channels contains programming. Once the channels that contain programming are distinguished from those that do not, a subset of channels with programming can be created. In one arrangement, the pictures that were created from the encoding step can be processed to determine whether the particular channel from which they were encoded contains programming. In an example the Appellant teaches that if a particular encoded signal contains one or more non-I pictures, then the number of bits in one or more of these non-I pictures can be counted. If the number of bits is lower than a typical non-I picture, for example, 20% lower than typical non-I picture, then there is a good possibility that the encoded signal is a DBS signal that carries no programming. This determination can be made because the non-I pictures from these types of signals contain very little encoded information, as the signal display almost never varies.

The Appellant further teaches that in another arrangement, the motion vectors in one or more non-intra pictures in the encoded signals can be analyzed to determine whether a particular signal contains a still video pattern. If all the motion vectors have a value of zero or substantially close to zero, then there is a good chance that the non-I pictures from which they are measured are from a signal carrying a still video pattern. To improve the accuracy of the invention, a greater

number of these non-I pictures can be checked in accordance with the examples listed above.

The Appellant teaches that in yet an alternate embodiment, one or more I pictures in each encoded signal can be processed for purposes of eliminating the signals containing still video patterns. Specifically, the discrete cosine transform (DCT) coefficients in each I picture can be examined; notably, if the DCT alternating current (ac) coefficients are zero or substantially zero in a large number of the macroblocks in a particular I picture, then there is a good possibility that that I picture is from an encoded signal carrying a still video pattern.

In another arrangement, information relating to the DCT-ac coefficient values for each macroblock contained in a sample picture from one or more of the non-programming channels can be stored in memory. Subsequently, the DCT-ac coefficients of all or a portion of the macroblocks contained in an I picture being analyzed can then be compared to the sample picture DCT-ac information stored in memory. If there is a correlation between the DCT-ac coefficients of the macroblocks contained in the I picture being analyzed and the DCT-ac coefficients of the macroblocks contained in the sample picture from the particular channel being examined, then there is a good chance that the I picture is from a non-programming channel.

Even further, a sample picture can be retrieved from one or more of the non-programming channels and other relevant information from these sample pictures can be stored in memory. As an example, the number of bits in each of these sample pictures can be counted and stored in memory. Subsequently, the number of bits from the I pictures being analyzed can be counted and then compared to the number of bits contained in a corresponding sample picture (a corresponding sample pictures is a sample picture that has been retrieved from the particular channel from which the I pictures being analyzed originate). If the number of bits in a specific I picture are within a predetermined threshold - for example, within twenty percent of the number of bits contained in the sample picture - then there is a good chance that the I picture is from a channel containing no programming. It should be noted that the invention is not limited to this particular example, as any other suitable threshold can be used to help determine whether an I picture is from a non-programming

channel. The Appellant teaches that similar to the non-I pictures, processing a greater number of I pictures in accordance with the above examples may improve the accuracy of the invention.

Continuing with step 214, the Appellant teaches that once the channels that contain programming are separated from those that do not, the channels that contain programming can be combined to form a subset of channels with programming.

For example, in a fourth step (step 216) the subset of channels can be stored into memory. In one arrangement, the subset of channels can be one or more channel indicators, which can be stored in memory. As an example, the channel indicators can preferably be channel numbers or any other suitable means for identifying a particular channel.

In a fifth step (step 218), these channel indicators can then be provided to a display device. Since the display device can access a subset of channels containing programming, the display device can skip over the channels that do not carry any programming thereby eliminating the delay associated with browsing through these non-programming channels. Moreover, should the status of one or more of the channels change, for example, if programming is added to a channel that previously carried no programming, then the process can be re-initiated to add (or delete) channels from the subset of channels.

The Appellant teaches that in another arrangement, the audio of one or more of the plurality of channels can be processed to determine which channels contain programming. Significantly, the channels that do not have any programming typically do not carry any audio. Thus, the audio level of each channel can be examined to separate the non-programming channels from the channels that have programming. This process of examining the level of audio contained in each channel can be used solely for purposes of creating a subset of channels with programming or can be used to supplement the process.

For the convenience of the Board of Patent Appeals and Interferences, Appellant's pending claims are presented below in claim format with elements read on the drawings and appropriate citations to at least one portion of the specification for each element of the appealed claims (with reference numerals added).

Claim 1 positively recites (with reference numerals added, where applicable):

1. A method of creating a subset of channels with programming from a plurality of channels, comprising the steps of:
receiving (210) a plurality of channels, wherein the plurality of channels comprises at least one channel with programming;
encoding (212) at least a portion of a predetermined number of channels from the plurality of channels to provide corresponding encoded intra and/or non-intra pictures for each of the predetermined number of channels;
processing (214) at least one of the corresponding intra and/or non-intra pictures for each of the predetermined number of channels to determine which of the predetermined number of channels contain programming to provide the subset of channels with programming; and
storing (216) the subset of channels into memory.
(See Appellant's specification, page 8, line 18 through page 12, line 15).

Claim 2 positively recites:

2. The method according to claim 1, further comprising the step of outputting channels exclusively corresponding to the subset of channels.
(See Appellant's specification, page 3, lines 12-13; page 7, lines 13-15).

Claim 3 positively recites:

3. The method according to claim 1, further comprising the step of analyzing at least a portion of an audio signal in the predetermined channels to determine which of the predetermined number of channels contain programming. (See Appellant's specification, page 7, lines 7-12; page 12, line 23 through page 13, line 6).

Claim 4 positively recites:

4. The method according to claim 1, wherein each corresponding encoded signal is an MPEG video signal containing pictures selected from the group comprising intra pictures or non-intra pictures. (See Appellant's specification, page 3, lines 17-18; page 9, lines 6-9).

Claim 5 positively recites:

5. The method according to claim 4, wherein said processing step further comprises one or more of the steps selected from the group comprising:

counting a number of bits in at least one of the non-intra pictures in the MPEG video signal;
analyzing motion vectors in at least one of the non-intra pictures in the MPEG video signal;
analyzing discrete cosine coefficients of at least one of the intra pictures in the MPEG video signal; or
obtaining a sample picture from one or more of the plurality of channels containing no programming, storing information from the sample picture in memory, and comparing information from at least one of the intra pictures in the MPEG video signal with the stored information from the sample picture. (See Appellant's specification, page 9, line 23 through page 11, line 21).

Claim 6 positively recites:

6. The method according to claim 1, wherein said encoding step further comprises the step of encoding at least a portion of each of the plurality of channels to provide the corresponding encoded signal for each of the plurality of channels. (See Appellant's specification, page 3, lines 7-9; page 9, lines 3-6).

Claim 7 positively recites:

7. The method according to claim 1, wherein the subset of channels comprises a plurality of channel indicators for identifying the channels in the subset of channels. (See Appellant's specification, page 4, lines 13-16; page 8, lines 7-10, page 12, lines 12-15).

Claim 8 positively recites:

8. A method of creating a subset of channels with programming from a plurality of channels, comprising the steps of:
receiving (210) a plurality of channels, wherein the plurality of channels comprises at least one channel with programming;
encoding (212) at least a portion of a predetermined number of channels from the plurality of channels to provide corresponding encoded intra and/or non-intra pictures for each of the predetermined number of channels;
processing (214) at least one of the corresponding encoded intra and/or non-intra pictures for each of the predetermined number of channels and a portion of a respective audio signal in the predetermined number of channels from the plurality of channels to determine which of the predetermined number of channels contain programming to provide a program channel subset; and

storing (216) the program channel subset into memory.
(See Appellant's specification, page 8, line 18 through page 13, line 3).

Claim 9 positively recites:

9. The method according to claim 8, wherein the programming on the subset of channels contains video content. (See Appellant's specification, page 4, lines 13-16).

Claim 10 positively recites:

10. A system (100) for creating a subset of channel indicators for channels with programming from a plurality of channels, comprising:
a receiver (112) for receiving a plurality of channels, wherein the plurality of channels comprises at least one channel with programming;
a video processor (121) programmed to:
 encode at least a portion of a predetermined number of channels from the plurality of channels to provide corresponding encoded intra and/or non- intra pictures for each predetermined channel; and
 process at least one of the corresponding encoded intra and/or non-intra pictures for each of the predetermined number of channels to determine which of the predetermined number of channels contain programming to provide the subset of channel indicators; and
memory (118) for storing the subset of channel indicators.
(See Appellant's specification, page 5, line 24 through page 8, line 3).

Claim 11 positively recites:

11. The system according to claim 10, wherein the system presents channels corresponding only to the subset of channel indicators stored in memory. (See Appellant's specification, page 7, lines 13-15; page 8, lines 15-17; page 12, lines 15-19).

Claim 12 positively recites:

12. The system according to claim 10, further comprising an audio detection circuit for analyzing at least a portion of an audio signal in the predetermined channels to determine which of the predetermined number of channels contain programming. (See Appellant's specification, page 7, lines 7-12).

Claim 13 positively recites:

13. The system according to claim 10, wherein each encoded signal is an MPEG video signal containing pictures selected from the group comprising intra pictures or non-intra pictures. (See Appellant's specification, page 3, lines 17-18; page 9, lines 6-9).

Claim 14 positively recites:

14. The system according to claim 13, wherein the video processor is further programmed to perform one or more of the steps selected from the group comprising:
counting a number of bits in at least one of the non-intra pictures in the MPEG video signal;
analyzing motion vectors in at least one of the non-intra pictures in the MPEG video signal;
analyzing discrete cosine coefficients of at least one of the intra pictures in the MPEG video signal; or
obtaining a sample picture from one or more of the plurality of channels containing no programming, storing information from the sample picture in memory, and comparing information from at least one of the intra pictures in the MPEG video signal with the stored information from the sample picture. (See Appellant's specification, page 9, line 23 through page 11, line 21).

Claim 15 positively recites:

15. The system according to claim 10, wherein the encoder encodes at least a portion of each of the plurality of channels to provide a corresponding encoded signal for each of the plurality of channels. (See Appellant's specification, page 3, lines 7-9; page 9, lines 3-6).

Claim 16 positively recites:

16. A system (100) for creating a subset of channels with programming from a plurality of channels, comprising:
a receiver (112) for receiving a plurality of channels, wherein the plurality of channels comprises at least one channel with programming including video and audio;
an encoder (116) for encoding at least a portion of a predetermined number of channels from the plurality of channels to provide corresponding encoded intra and/or non-intra pictures for each of the predetermined number of channels;
a processor (120) using at least one of the encoder (116) and an audio detection circuit (124) to process at least a portion of an audio signal in the

predetermined number of channels from the plurality of channels, wherein the processor determines which of the predetermined number of channels contain programming to provide a program channel subset containing at least audio and/or video; and

memory (118) for storing the program channel subset.

(See Appellant's specification, page 5, line 24 through page 8, line 3).

Claim 17 positively recites:

17. The system according to claim 10, wherein the subset of channels comprises a plurality of channel indicators for identifying the channels in the subset of channels. (See Appellant's specification, page 4, lines 13-16; page 8, lines 7-10, page 12, lines 12-15).

Grounds of Rejections to be Reviewed on Appeal

1. Whether the Appellant's claims 1-17 are patentable under 35 U.S.C. § 103(a) over Elenbaas et al. (US Pub. No. 2005/0028194) in view of Barton (US Patent No. 6,233,389).
2. Pending claims 1-17 have been grouped together by the Examiner in their rejection. Appellant urges that each of the rejected claims stands on its own recitation, the claims being considered to be separately patentable for the reasons set forth in more detail *infra*.

ARGUMENT

I. THE EXAMINER ERRED IN REJECTING CLAIMS 1-17 UNDER 35 U.S.C. § 103(a) BECAUSE THE CITED REFERENCES FAIL TO TEACH, SUGGEST OR MAKE OBVIOUS AT LEAST A METHOD AND SYSTEM FOR CREATING A SUBSET OF CHANNELS OF PROGRAMMING FROM A PLURALITY OF CHANNELS INCLUDING AT LEAST "ENCODING AT LEAST A PORTION OF A PREDETERMINED NUMBER OF CHANNELS FROM THE PLURALITY OF CHANNELS TO PROVIDE CORRESPONDING ENCODED INTRA AND/OR NON-INTRA PICTURES FOR EACH OF THE PREDETERMINED NUMBER OF CHANNELS" AND "PROCESSING AT LEAST ONE OF THE CORRESPONDING INTRA AND/OR NON-INTRA PICTURES FOR EACH OF THE PREDETERMINED NUMBER OF CHANNELS TO DETERMINE WHICH OF THE PREDETERMINED NUMBER OF CHANNELS CONTAIN PROGRAMMING".

A. 35 U.S.C. § 103(a) - Claim 1

The Examiner rejected claims 1-17 under 35 U.S.C. § 103(a) as being unpatentable over Elenbaas et al. (U.S. Pub. No. 2005/0028194, hereinafter "Elenbaas") in view of Barton (U.S. Patent No. 6,233,389). The rejection was traversed.

The Examiner cited Elenbaas for teaching all of the aspects of the Appellant's invention except for the encoding step. That is, the Examiner conceded that Elenbaas fails to teach, suggest or make obvious "encoding at least a portion of a predetermined number of channels from the plurality of channels to provide corresponding encoded intra and/or non-intra pictures for each of the predetermined number of channels" as taught in the Appellant's Specification and claimed by at least the Appellant's claim 1. The Examiner, however, cited Barton for teaching the encoding step of the Appellant's invention. The Appellant disagreed.

The Appellant agreed with the Examiner that Elenbaas fails to teach, suggest or make obvious "encoding at least a portion of a predetermined number of channels from the plurality of channels to provide corresponding encoded intra and/or non-intra pictures for each of the predetermined number of channels" as taught in the Appellant's Specification and claimed by at least the Appellant's claim 1, however the

Appellant further submits that Elenbaas also fails to teach, suggest or make obvious "processing at least one of the corresponding intra and/or non-intra pictures for each of the predetermined number of channels to determine which of the predetermined number of channels contain programming" as taught in the Appellant's Specification and claimed by at least the Appellant's claim 1.

That is, the Appellant's claim 1 specifically recites:

"A method of creating a subset of channels with programming from a plurality of channels, comprising the steps of:
receiving a plurality of channels, wherein the plurality of channels comprises at least one channel with programming;
encoding at least a portion of a predetermined number of channels from the plurality of channels to provide corresponding encoded intra and/or non-intra pictures for each of the predetermined number of channels;
processing at least one of the corresponding intra and/or non-intra pictures for each of the predetermined number of channels to determine which of the predetermined number of channels contain programming to provide the subset of channels with programming; and
storing the subset of channels into memory."

As evidenced by at least claim 1 presented above, in the invention of the Appellant, encoded intra and/or non-intra pictures of the predetermined number of channels are processed to determine which of the predetermined number of channels contain programming. In support of at least claim 1, the Appellant in the Specification specifically recites:

"At step 212, a portion of a predetermined number of these plurality of channels can be encoded to provide a corresponding encoded signal for each of the predetermined channels. It should be noted that any number of the plurality of channels can be encoded, including all the plurality of channels. In one arrangement, the encoding step can be performed by encoding a portion of each of the predetermined number of channels into MPEG formatted pictures such as intra (I) pictures or non-intra (non-I) pictures. Non-I pictures can include predictive (P) or bi-directional predictive (B) pictures." (See Specification, page 9, lines 3-10).

And

"At step 214, each of the encoded signals can be processed to determine which of the predetermined number of channels contains programming. Once the channels that contain programming are distinguished from those that do not, a subset of channels with programming can be created. In one arrangement, the pictures that were created from the encoding step can be processed to determine whether the particular channel from which they were encoded contains programming.

As an example, if a particular encoded signal contains one or more non-I pictures, then the number of bits in one or more of these non-I pictures can be counted. If the number of bits is lower than a typical non-I picture, for example, 20% lower than typical non-I picture, then there is a good possibility that the encoded signal is a DBS signal that carries no programming. (See Specification, page 9, line 16 through page 10, line 3).

And

"In another arrangement, the motion vectors in one or more non-intra pictures in the encoded signals can be analyzed to determine whether a particular signal contains a still video pattern. If all the motion vectors have a value of zero or substantially close to zero, then there is a good chance that the non-I pictures from which they are measured are from a signal carrying a still video pattern. (See Specification, page 10, lines 9-13).

And

"In another arrangement, one or more I pictures in each encoded signal can be processed for purposes of eliminating the signals containing still video patterns. Specifically, the discrete cosine transform (DCT) coefficients in each I picture can be examined; notably, if the DCT alternating current (ac) coefficients are zero or substantially zero in a large number of the macroblocks in a particular I picture, then there is a good possibility that that I picture is from an encoded signal carrying a still video pattern. (See Specification, page 10, line 19 through page 11, line 1).

As clearly evident from at least the portions of the Appellant's Specification presented above, in the invention of the Appellant, a predetermined number of channels from a plurality of channels received are encoded to provide corresponding encoded intra and/or non-intra pictures for each of the predetermined number of channels and the encoded intra and/or non-intra pictures of the predetermined number of channels are processed **to determine which of the predetermined number of channels contain programming.**

The Appellant respectfully submits that along with failing to teach, suggest or making obvious at least "encoding at least a portion of a predetermined number of channels from the plurality of channels to provide corresponding encoded intra and/or non-intra pictures for each of the predetermined number of channels" as taught in the Appellant's Specification and claimed by at least the Appellant's claim 1 (as conceded by the Examiner, Elenbaas also fails to teach, suggest or make obvious "processing at least one of the corresponding intra and/or non-intra pictures for each of the predetermined number of channels to determine which of the predetermined number of channels contain programming" as taught in the Appellant's Specification and claimed by at least the Appellant's claim 1.

In the Final Office Action, the Examiner cited paragraphs [25, 26, 27, 30 and 31] of Elenbaas for teaching the processing step of the Appellant's invention. The Appellant respectfully disagrees. More specifically, Elenbaas teaches a personalized news retrieval system. In Elenbaas, a video retrieval system is presented that allows a user to quickly and easily select and receive stories of interest from a video stream. That is, in Elenbaas key frames of each selected story are sequentially displayed; when the user views a frame of interest, the user selects the story that is associated with the key frame for more detailed viewing. The paragraphs of Elenbaas cited by the Examiner for teaching the processing step of the Appellant's invention merely describe the extraction of key frames of the invention of Elenbaas. More specifically, as cited by the Examiner, Elenbaas merely teaches that a first frame of each scene can be identified based upon the differences between frames. That is in Elenbaas, if the differences are substantial, the new frames are typically encoded directly as reference frames; subsequent frames are encoded as differences from these reference frames. Subsequently, a classifier characterizes each story segment into topics and sub-categories. Optionally in Elenbaas, a visual classifier can characterize story segments based on their visual content. Subsequently, the classified story segments are compared to user preferences and a filter identifies each of the story segments with a classification that matches the user preferences.

However, there is absolutely no teaching, disclosure or suggestion in Elenbaas for "processing at least one of the corresponding intra and/or non-intra pictures for each of the predetermined number of channels to determine which of the predetermined number of channels contain programming" as taught in the Appellant's Specification and claimed by at least the Appellant's claim 1. That is, Elenbaas absolutely fails to teach, suggest or make obvious processing respective intra and/or non-intra pictures of a predetermined number of channels from a plurality of channels received **to determine which of the predetermined number of channels contain programming**, the channels having been encoded to provide the corresponding encoded intra and/or non-intra pictures for each of the predetermined number of channels. In contrast to the invention of the Appellant, in Elenbaas, key frames of a news program are identified, classified and compared to

user preferences for enabling a user to receive only stories of interest to a user. There is absolutely no teaching or suggestion in Elenbaas for determining which of a predetermined number of channels contain programming and which do not.

In addition, the Appellant respectfully submits that the teachings of Barton, also fail to teach, suggest or make obvious at least a method and system for creating a subset of channels with programming from a plurality of channels including "encoding at least a portion of a predetermined number of channels from the plurality of channels to provide corresponding encoded intra and/or non-intra pictures for each of the predetermined number of channels" and "processing at least one of the corresponding intra and/or non-intra pictures for each of the predetermined number of channels to determine which of the predetermined number of channels contain programming" as taught in the Appellant's Specification and claimed by at least the Appellant's claim 1. That is, the Appellant respectfully submits that the teachings of Barton, absolutely fail to bridge the substantial gap between Elenbaas and the invention of the Appellant.

That is, the teachings of Barton for a multimedia time warping system, which allows a user to store selected television broadcast programs while simultaneously watching or reviewing another program, fail to teach, suggest or make obvious at least a method of creating a subset of channels with programming from a plurality of channels including at least "encoding at least a portion of a predetermined number of channels from the plurality of channels to provide corresponding encoded intra and/or non-intra pictures for each of the predetermined number of channels" and "processing at least one of the corresponding encoded intra and/or non-intra pictures for each of the predetermined number of channels to determine which of the predetermined number of channels contain programming " as taught in the Appellant's Specification and claimed by at least the Appellant's claim 1.

More specifically, Barton teaches a multimedia time warping system, which allows a user to store selected television broadcast programs while the user is simultaneously watching or reviewing another program. In Barton, television (TV) input streams can be received in a multitude of forms, for example, analog forms such as National Television Standards Committee (NTSC) or PAL broadcast, and digital forms such as Digital Satellite System (DSS), Digital Broadcast Services

(DBS), or Advanced Television Standards Committee (ATSC). Analog TV streams are converted to a Moving Pictures Experts Group (MPEG) formatted stream for internal transfer and manipulation, while pre-formatted MPEG streams are extracted from the digital TV signal and presented in a similar format to encoded analog streams. The invention of Barton parses the resulting MPEG stream and separates it into its video and audio components. It then stores the components into temporary buffers.

The parser and event buffer decouple the CPU from having to parse the MPEG stream and from the real time nature of the data streams. This decoupling allows for slower CPU and bus speeds which translate to lower system costs. The video and audio components are stored on a storage device. When the program is requested for display, the video and audio components are extracted from the storage device and reassembled into an MPEG stream. The MPEG stream is sent to a decoder. The decoder converts the MPEG stream into TV output signals and delivers the TV output signals to a TV receiver.

However, there is absolutely no teaching, suggestion or disclosure in Barton for at least "encoding at least a portion of a predetermined number of channels from the plurality of channels to provide corresponding encoded intra and/or non-intra pictures for each of the predetermined number of channels" and "processing at least one of the corresponding intra and/or non-intra pictures for each of the predetermined number of channels **to determine which of the predetermined number of channels contain programming**" as taught in the Appellant's Specification and claimed by at least the Appellant's claim 1. That is, in Barton portions of a predetermined number of channels of a plurality of channels are not encoded and processed to provide corresponding encoded intra and/or non-intra pictures for each of the predetermined number of channels to determine which of the predetermined number of channels contain programming as taught and claimed by the Applicant. Instead in Barton, analog TV streams are converted to a Moving Pictures Experts Group (MPEG) formatted stream for internal transfer and manipulation including recording.

The Appellant further submits that there is absolutely no motivation or suggestion in either reference for the combination of the references to attempt to

teach the invention of the Appellant. More specifically, there is no motivation or suggestion in the invention of Elenbaas for a personalized news retrieval system for the combination of the references and likewise, the invention of Barton for a multimedia time warping system, which allows a user to store selected television broadcast programs while simultaneously watching or reviewing another program does not expressly or impliedly motivate or suggest such a combination as required for the combination of references under 35 U.S.C. § 103. The teachings of Elenbaas and Barton are directed to different solutions addressing different deficiencies in the prior art of unrelated areas of art.

More specifically, for prior art reference to be combined to render obvious a subsequent invention under 35 U.S.C. § 103, there must be something in the prior art as a whole which suggests the desirability, and thus the obviousness, of making the combination. Uniroyal v. Rudkin-Wiley, 5 U.S.P.SQ.2d 1434, 1438 (Fed. Cir. 1988). The teachings of the references can be combined **only** if there is some suggestion or incentive in the prior art to do so. In re Fine, 5 U.S.P.SQ.2d 1596, 1599 (Fed. Cir. 1988). ***Hindsight is strictly forbidden. It is impermissible to use the claims as a framework to pick and choose among individual references to recreate the claimed invention*** Id. at 1600; W.L. Gore Associates, Inc., v. Garlock, Inc., 220 U.S.P.Q. 303, 312 (Fed. Cir. 1983).

Moreover, the mere fact that a prior art structure could be modified to produce the claimed invention would not have made the modification obvious unless the prior art suggested the desirability of the modification. In re Fritch, 23 U.S.P.Q.2d 1780, 1783 (Fed. Cir. 1992); In re Gordon, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984).

The Appellant further submits that even if there was a motivation or suggestion to combine (which the Appellant maintains that there is not), the teachings of Elenbaas and Barton, in any allowable combination, fail to teach, suggest or make obvious the Appellant's invention, at least with regard to the Appellant's independent claim 1. That is, the teachings of Barton fail to bridge the substantial gap between at least the Appellant's independent claim 1 and the teachings of Elenbaas.

That is, as conceded by the Examiner, Elenbaas fails to teach, suggest or make obvious at least "encoding at least a portion of a predetermined number of

channels from the plurality of channels to provide corresponding encoded intra and/or non-intra pictures for each of the predetermined number of channels" as taught in the Appellant's Specification and claimed by at least the Appellant's claim

1. In addition and for at least the reasons recited above, the Appellant further submits that Barton also fails to teach, suggest or make obvious "encoding at least a portion of a predetermined number of channels from the plurality of channels to provide corresponding encoded intra and/or non-intra pictures for each of the predetermined number of channels" as taught in the Appellant's Specification and claimed by at least the Appellant's claim 1.

In addition and for at least the reasons recited above, the Appellant submits that Elenbaas and Barton, alone or in any allowable combination, also fail to teach, suggest or make obvious "processing at least one of the corresponding intra and/or non-intra pictures for each of the predetermined number of channels **to determine which of the predetermined number of channels contain programming**" as taught in the Appellant's Specification and claimed by at least the Appellant's claim 1. That is, at least because Elenbaas and Barton, alone fail to teach, suggest or make obvious "processing at least one of the corresponding intra and/or non-intra pictures for each of the predetermined number of channels **to determine which of the predetermined number of channels contain programming**" as taught and claimed by the Appellant, the Appellant further submits that any allowable combination of Elenbaas and Barton also fail to teach, suggest or make obvious "processing at least one of the corresponding intra and/or non-intra pictures for each of the predetermined number of channels **to determine which of the predetermined number of channels contain programming**" as taught in the Appellant's Specification and claimed by at least the Appellant's claim 1.

Therefore, the Appellant submits that, for at least the reasons recited above, independent claim 1 is not rendered obvious under the provisions of 35 U.S.C. § 103(a) by the teachings of Elenbaas and Barton, alone or in any allowable combination, and, as such, fully satisfies the requirements of 35 U.S.C. § 103 and is patentable thereunder.

B. 35 U.S.C. § 103(a) - Claim 2

Claim 2 depends directly from independent claim 1 and recites further limitations thereof. At least because teachings of Elenbaas and Barton, alone or in any allowable combination, fail to teach, suggest or make obvious the invention of the Appellant with regard to at least the Appellant's independent claim 1, the Appellant respectfully submits that dependent claim 2 is also not rendered obvious and is allowable for at least the reasons stated above with respect to independent claim 1. The Appellant further submits that Elenbaas and Barton, alone or in any allowable combination, also fails to teach, suggest or make obvious the Appellant's claim 1 further limited by "the step of outputting channels exclusively corresponding to the subset of channels" as in claim 2.

That is, and for at least the same reasons provided in Section A above, at least because Elenbaas and Barton, alone or in any allowable combination, fail to teach, suggest or make obvious at least a method and system for creating a subset of channels with programming from a plurality of channels including "encoding at least a portion of a predetermined number of channels from the plurality of channels to provide corresponding encoded intra and/or non-intra pictures for each of the predetermined number of channels" and "processing at least one of the corresponding intra and/or non-intra pictures for each of the predetermined number of channels to determine which of the predetermined number of channels contain programming" as taught in the Appellant's Specification and claimed in at least the Appellant's claim 1, the Appellant respectfully submits that Elenbaas and Barton, alone or in any allowable combination, also fail to teach, suggest or make obvious the Appellant's invention as claimed in dependent claim 2, which depends directly from independent claim 1.

Therefore, the Appellant submits that claim 2, as it now stands, fully satisfies the requirements of 35 U.S.C. § 103 and is patentable thereunder.

C. 35 U.S.C. § 103 - Claim 3

Claim 3 depends directly from independent claim 1 and recites further limitations thereof. At least because teachings of Elenbaas and Barton, alone or in any allowable combination, fail to teach, suggest or make obvious the invention of the Appellant with regard to at least the Appellant's independent claim 1, the

Appellant respectfully submits that dependent claim 3 is also not rendered obvious and is allowable for at least the reasons stated above with respect to independent claim 1. The Appellant further submits that Elenbaas and Barton, alone or in any allowable combination, also fails to teach, suggest or make obvious the Appellant's claim 1 further limited by "comprising the step of analyzing at least a portion of an audio signal in the predetermined channels to determine which of the predetermined number of channels contain programming" as in claim 3.

That is, and for at least the same reasons provided in Section A above, at least because Elenbaas and Barton, alone or in any allowable combination, fail to teach, suggest or make obvious at least a method and system for creating a subset of channels with programming from a plurality of channels including "encoding at least a portion of a predetermined number of channels from the plurality of channels to provide corresponding encoded intra and/or non-intra pictures for each of the predetermined number of channels" and "processing at least one of the corresponding intra and/or non-intra pictures for each of the predetermined number of channels to determine which of the predetermined number of channels contain programming" as taught in the Appellant's Specification and claimed in at least the Appellant's claim 1, the Appellant respectfully submits that Elenbaas and Barton, alone or in any allowable combination, also fail to teach, suggest or make obvious the Appellant's invention as claimed in dependent claim 3, which depends directly from independent claim 1.

Therefore, the Appellant submits that claim 3, as it now stands, fully satisfies the requirements of 35 U.S.C. § 103 and is patentable thereunder.

D. 35 U.S.C. § 103(a) - Claim 4

Claim 4 depends directly from independent claim 1 and recites further limitations thereof. At least because teachings of Elenbaas and Barton, alone or in any allowable combination, fail to teach, suggest or make obvious the invention of the Appellant with regard to at least the Appellant's independent claim 1, the Appellant respectfully submits that dependent claim 4 is also not rendered obvious and is allowable for at least the reasons stated above with respect to independent claim 1. The Appellant further submits that Elenbaas and Barton, alone or in any allowable combination, also fails to teach, suggest or make obvious the Appellant's

claim 1 further limited by "wherein each corresponding encoded signal is an MPEG video signal containing pictures selected from the group comprising intra pictures or non-intra pictures" as in claim 4.

That is, and for at least the same reasons provided in Section A above, at least because Elenbaas and Barton, alone or in any allowable combination, fail to teach, suggest or make obvious at least a method and system for creating a subset of channels with programming from a plurality of channels including "encoding at least a portion of a predetermined number of channels from the plurality of channels to provide corresponding encoded intra and/or non-intra pictures for each of the predetermined number of channels" and "processing at least one of the corresponding intra and/or non-intra pictures for each of the predetermined number of channels to determine which of the predetermined number of channels contain programming" as taught in the Appellant's Specification and claimed in at least the Appellant's claim 1, the Appellant respectfully submits that Elenbaas and Barton, alone or in any allowable combination, also fail to teach, suggest or make obvious the Appellant's invention as claimed in dependent claim 4, which depends directly from independent claim 1.

Therefore, the Appellant submits that claim 4, as it now stands, fully satisfies the requirements of 35 U.S.C. § 103 and is patentable thereunder.

E. 35 U.S.C. § 103(a) - Claim 5

Claim 5 depends directly from claim 4 which depends directly from independent claim 1 and recites further limitations thereof. At least because teachings of Elenbaas and Barton, alone or in any allowable combination, fail to teach, suggest or make obvious the invention of the Appellant with regard to at least the Appellant's independent claim 1 and dependent claim 4, the Appellant respectfully submits that dependent claim 5 is also not rendered obvious and is allowable for at least the reasons stated above with respect to independent claim 1 and dependent claim 4. The Appellant further submits that Elenbaas and Barton, alone or in any allowable combination, also fail to teach, suggest or make obvious the Appellant's claims 1 and 4 further limited by "wherein said processing step further comprises one or more of the steps selected from the group comprising: counting a number of bits in at least one of the non-intra pictures in the MPEG video signal;

analyzing motion vectors in at least one of the non-intra pictures in the MPEG video signal; analyzing discrete cosine coefficients of at least one of the intra pictures in the MPEG video signal; or obtaining a sample picture from one or more of the plurality of channels containing no programming, storing information from the sample picture in memory, and comparing information from at least one of the intra pictures in the MPEG video signal with the stored information from the sample picture" as recited in claim 5.

That is, and for at least the same reasons provided in Sections A and D above, at least because Elenbaas and Barton, alone or in any allowable combination, fail to teach, suggest or make obvious at least a method and system for creating a subset of channels with programming from a plurality of channels including "encoding at least a portion of a predetermined number of channels from the plurality of channels to provide corresponding encoded intra and/or non-intra pictures for each of the predetermined number of channels" and "processing at least one of the corresponding intra and/or non-intra pictures for each of the predetermined number of channels to determine which of the predetermined number of channels contain programming" as taught in the Appellant's Specification and claimed in at least the Appellant's claim 1, and as further limited by the limitations of claim 4, the Appellant respectfully submits that Elenbaas and Barton, alone or in any allowable combination, also fail to teach, suggest or make obvious the Appellant's invention as claimed in dependent claim 5, which depends directly from claim 4 and indirectly from independent claim 1.

Therefore, the Appellant submits that claim 5, as it now stands, fully satisfies the requirements of 35 U.S.C. § 103 and is patentable thereunder.

F. 35 U.S.C. § 103(a) - Claim 6

Claim 6 depends directly from independent claim 1 and recites further limitations thereof. At least because teachings of Elenbaas and Barton, alone or in any allowable combination, fail to teach, suggest or make obvious the invention of the Appellant with regard to at least the Appellant's independent claim 1, the Appellant respectfully submits that dependent claim 6 is also not rendered obvious and is allowable for at least the reasons stated above with respect to independent claim 1. The Appellant further submits that Elenbaas and Barton, alone or in any

allowable combination, also fails to teach, suggest or make obvious the Appellant's claim 1 further limited by "wherein said encoding step further comprises the step of encoding at least a portion of each of the plurality of channels to provide the corresponding encoded signal for each of the plurality of channels" as in claim 6.

That is, and for at least the same reasons provided in Section A above, at least because Elenbaas and Barton, alone or in any allowable combination, fail to teach, suggest or make obvious at least a method and system for creating a subset of channels with programming from a plurality of channels including "encoding at least a portion of a predetermined number of channels from the plurality of channels to provide corresponding encoded intra and/or non-intra pictures for each of the predetermined number of channels" and "processing at least one of the corresponding intra and/or non-intra pictures for each of the predetermined number of channels to determine which of the predetermined number of channels contain programming" as taught in the Appellant's Specification and claimed in at least the Appellant's claim 1, the Appellant respectfully submits that Elenbaas and Barton, alone or in any allowable combination, also fail to teach, suggest or make obvious the Appellant's invention as claimed in dependent claim 6, which depends directly from independent claim 1.

Therefore, the Appellant submits that claim 6, as it now stands, fully satisfies the requirements of 35 U.S.C. § 103 and is patentable thereunder.

G. 35 U.S.C. § 103(a) - Claim 7

Claim 7 depends directly from independent claim 1 and recites further limitations thereof. At least because teachings of Elenbaas and Barton, alone or in any allowable combination, fail to teach, suggest or make obvious the invention of the Appellant with regard to at least the Appellant's independent claim 1, the Appellant respectfully submits that dependent claim 7 is also not rendered obvious and is allowable for at least the reasons stated above with respect to independent claim 1. The Appellant further submits that Elenbaas and Barton, alone or in any allowable combination, also fails to teach, suggest or make obvious the Appellant's claim 1 further limited by " wherein the subset of channels comprises a plurality of

channel indicators for identifying the channels in the subset of channels " as in claim 7.

That is, and for at least the same reasons provided in Section A above, at least because Elenbaas and Barton, alone or in any allowable combination, fail to teach, suggest or make obvious at least a method and system for creating a subset of channels with programming from a plurality of channels including "encoding at least a portion of a predetermined number of channels from the plurality of channels to provide corresponding encoded intra and/or non-intra pictures for each of the predetermined number of channels" and "processing at least one of the corresponding intra and/or non-intra pictures for each of the predetermined number of channels to determine which of the predetermined number of channels contain programming" as taught in the Appellant's Specification and claimed in at least the Appellant's claim 1, the Appellant respectfully submits that Elenbaas and Barton, alone or in any allowable combination, also fail to teach, suggest or make obvious the Appellant's invention as claimed in dependent claim 7, which depends directly from independent claim 1.

Therefore, the Appellant submits that claim 7, as it now stands, fully satisfies the requirements of 35 U.S.C. § 103 and is patentable thereunder.

H. 35 U.S.C. § 103(a) - Claim 8

Claim 8 is an independent claim that recites similar relevant features as recited in the Appellant's independent claim 1. More specifically, claim 8 claims a method for creating a subset of channels with programming from a plurality of channels including "encoding at least a portion of a predetermined number of channels from the plurality of channels to provide corresponding encoded intra and/or non-intra pictures for each of the predetermined number of channels" and "processing at least one of the corresponding intra and/or non-intra pictures for each of the predetermined number of channels to determine which of the predetermined number of channels contain programming".

As described in section A above, the teachings of Elenbaas and Barton, alone or in any allowable combination, fail to teach, suggest or make obvious at least a method and system for creating a subset of channels with programming from a

plurality of channels including "encoding at least a portion of a predetermined number of channels from the plurality of channels to provide corresponding encoded intra and/or non-intra pictures for each of the predetermined number of channels" and "processing at least one of the corresponding intra and/or non-intra pictures for each of the predetermined number of channels to determine which of the predetermined number of channels contain programming" as taught in the Appellant's Specification and claimed in at least the Appellant's claim 1 and as similarly claimed in the Appellant's claim 8. That is, the Appellant respectfully submits that independent claim 8 is also not rendered obvious by Elenbaas and Barton, alone or in any allowable combination, and is allowable for at least the reasons stated above with respect to independent claim 1.

Therefore, the Appellant submits that claim 8, as it now stands, fully satisfies the requirements of 35 U.S.C. § 103 and is patentable thereunder.

I. 35 U.S.C. § 102(b) - Claim 9

Claim 9 depends directly from independent claim 8 and recites further limitations thereof. At least because teachings of Elenbaas and Barton, alone or in any allowable combination, fail to teach, suggest or make obvious the invention of the Appellant with regard to at least the Appellant's independent claim 8, the Appellant respectfully submits that dependent claim 9 is also not rendered obvious and is allowable for at least the reasons stated above with respect to independent claim 8. The Appellant further submits that Elenbaas and Barton, alone or in any allowable combination, also fail to teach, suggest or render obvious the Appellant's claim 8 further limited by "wherein the programming on the subset of channels contains video content" as recited in claim 9.

That is, and for at least the same reasons provided in Sections A and H above, at least because Elenbaas and Barton, alone or in any allowable combination, fail to teach, suggest or make obvious at least a method for creating a subset of channels with programming from a plurality of channels including "encoding at least a portion of a predetermined number of channels from the plurality of channels to provide corresponding encoded intra and/or non-intra pictures for each of the predetermined number of channels" and "processing at least one of the

corresponding intra and/or non-intra pictures for each of the predetermined number of channels to determine which of the predetermined number of channels contain programming" as taught in the Appellant's Specification and claimed in at least the Appellant's claims 1 and 8, the Appellant respectfully submits that Elenbaas and Barton, alone or in any allowable combination, also fail to teach, suggest or render obvious the Appellant's invention as claimed in dependent claim 9, which depends directly from independent claim 8.

Therefore, the Appellant submits that claim 9, as it now stands, fully satisfies the requirements of 35 U.S.C. § 103 and is patentable thereunder.

J. 35 U.S.C. § 103(a) - Claim 10

Claim 10 is an independent claim that recites similar relevant features as recited in the Appellant's independent claim 1. More specifically, claim 10 claims a system for creating a subset of channels with programming from a plurality of channels including a video processor programmed to "encode at least a portion of a predetermined number of channels from the plurality of channels to provide corresponding encoded intra and/or non-intra pictures for each of the predetermined number of channels" and to "process at least one of the corresponding intra and/or non-intra pictures for each of the predetermined number of channels to determine which of the predetermined number of channels contain programming".

As described in sections A and H above, the teachings of Elenbaas and Barton, alone or in any allowable combination, fail to teach, suggest or make obvious at least a method and system for creating a subset of channels with programming from a plurality of channels including "encoding at least a portion of a predetermined number of channels from the plurality of channels to provide corresponding encoded intra and/or non-intra pictures for each of the predetermined number of channels" and "processing at least one of the corresponding intra and/or non-intra pictures for each of the predetermined number of channels to determine which of the predetermined number of channels contain programming" as taught in the Appellant's Specification and claimed in at least the Appellant's claims 1 and 8 and as similarly claimed in the Appellant's claim 10. That is, the Appellant respectfully submits that independent claim 10 is also not rendered obvious by Elenbaas and

Barton, alone or in any allowable combination, and is allowable for at least the reasons stated above with respect to independent claims 1 and 8.

Therefore, the Appellant submits that claim 10, as it now stands, fully satisfies the requirements of 35 U.S.C. § 103 and is patentable thereunder.

K. 35 U.S.C. § 103(a) - Claim 11

Claim 11 depends directly from independent claim 10 and recites further limitations thereof. At least because teachings of Elenbaas and Barton, alone or in any allowable combination, fail to teach, suggest or make obvious the invention of the Appellant with regard to at least the Appellant's independent claim 10, the Appellant respectfully submits that dependent claim 11 is also not rendered obvious and is allowable for at least the reasons stated above with respect to independent claim 10. The Appellant further submits that Elenbaas and Barton, alone or in any allowable combination, also fail to teach, suggest or render obvious the Appellant's claim 10 further limited by "wherein the system presents channels corresponding only to the subset of channel indicators stored in memory" as recited in claim 11.

That is, and for at least the same reasons provided in Sections A, H and J above, at least because Elenbaas and Barton, alone or in any allowable combination, fail to teach, suggest or make obvious at least a method and system for creating a subset of channels with programming from a plurality of channels including "encoding at least a portion of a predetermined number of channels from the plurality of channels to provide corresponding encoded intra and/or non-intra pictures for each of the predetermined number of channels" and "processing at least one of the corresponding intra and/or non-intra pictures for each of the predetermined number of channels to determine which of the predetermined number of channels contain programming" as taught in the Appellant's Specification and claimed in at least the Appellant's claims 1, 8 and 10, the Appellant respectfully submits that Elenbaas and Barton, alone or in any allowable combination, also fail to teach, suggest or render obvious the Appellant's invention as claimed in dependent claim 11, which depends directly from independent claim 10.

Therefore, the Appellant submits that claim 11, as it now stands, fully satisfies the requirements of 35 U.S.C. § 103 and is patentable thereunder.

L. 35 U.S.C. § 103(a) - Claim 12

Claim 12 depends directly from independent claim 10 and recites further limitations thereof. At least because teachings of Elenbaas and Barton, alone or in any allowable combination, fail to teach, suggest or make obvious the invention of the Appellant with regard to at least the Appellant's independent claim 10, the Appellant respectfully submits that dependent claim 12 is also not rendered obvious and is allowable for at least the reasons stated above with respect to independent claim 10. The Appellant further submits that Elenbaas and Barton, alone or in any allowable combination, also fail to teach, suggest or render obvious the Appellant's claim 10 further limited by "comprising an audio detection circuit for analyzing at least a portion of an audio signal in the predetermined channels to determine which of the predetermined number of channels contain programming" as recited in claim 12.

That is, and for at least the same reasons provided in Sections A, H and J above, at least because Elenbaas and Barton, alone or in any allowable combination, fail to teach, suggest or make obvious at least a method and system for creating a subset of channels with programming from a plurality of channels including "encoding at least a portion of a predetermined number of channels from the plurality of channels to provide corresponding encoded intra and/or non-intra pictures for each of the predetermined number of channels" and "processing at least one of the corresponding intra and/or non-intra pictures for each of the predetermined number of channels to determine which of the predetermined number of channels contain programming" as taught in the Appellant's Specification and claimed in at least the Appellant's claims 1, 8 and 10, the Appellant respectfully submits that Elenbaas and Barton, alone or in any allowable combination, also fail to teach, suggest or render obvious the Appellant's invention as claimed in dependent claim 12, which depends directly from independent claim 10.

Therefore, the Appellant submits that claim 12, as it now stands, fully satisfies the requirements of 35 U.S.C. § 103 and is patentable thereunder.

M. 35 U.S.C. § 103(a) - Claim 13

Claim 12 depends directly from independent claim 10 and recites further limitations thereof. At least because teachings of Elenbaas and Barton, alone or in any allowable combination, fail to teach, suggest or make obvious the invention of the Appellant with regard to at least the Appellant's independent claim 10, the Appellant respectfully submits that dependent claim 13 is also not rendered obvious and is allowable for at least the reasons stated above with respect to independent claim 10. The Appellant further submits that Elenbaas and Barton, alone or in any allowable combination, also fail to teach, suggest or render obvious the Appellant's claim 10 further limited by "wherein each encoded signal is an MPEG video signal containing pictures selected from the group comprising intra pictures or non-intra pictures" as recited in claim 13.

That is, and for at least the same reasons provided in Sections A, H and J above, at least because Elenbaas and Barton, alone or in any allowable combination, fail to teach, suggest or make obvious at least a method and system for creating a subset of channels with programming from a plurality of channels including "encoding at least a portion of a predetermined number of channels from the plurality of channels to provide corresponding encoded intra and/or non-intra pictures for each of the predetermined number of channels" and "processing at least one of the corresponding intra and/or non-intra pictures for each of the predetermined number of channels to determine which of the predetermined number of channels contain programming" as taught in the Appellant's Specification and claimed in at least the Appellant's claims 1, 8 and 10, the Appellant respectfully submits that Elenbaas and Barton, alone or in any allowable combination, also fail to teach, suggest or render obvious the Appellant's invention as claimed in dependent claim 13, which depends directly from independent claim 10.

Therefore, the Appellant submits that claim 13, as it now stands, fully satisfies the requirements of 35 U.S.C. § 103 and is patentable thereunder.

N. 35 U.S.C. § 103(a) - Claim 14

Claim 14 depends directly from claim 13 which depends directly from independent claim 10 and recites further limitations thereof. At least because

teachings of Elenbaas and Barton, alone or in any allowable combination, fail to teach, suggest or make obvious the invention of the Appellant with regard to at least the Appellant's independent claim 10 and dependent claim 13, the Appellant respectfully submits that dependent claim 14 is also not rendered obvious and is allowable for at least the reasons stated above with respect to independent claim 10 and dependent claim 13. The Appellant further submits that Elenbaas and Barton, alone or in any allowable combination, also fail to teach, suggest or make obvious the Appellant's claims 10 and 13 further limited by "wherein the video processor is further programmed to perform one or more of the steps selected from the group comprising: counting a number of bits in at least one of the non-intra pictures in the MPEG video signal; analyzing motion vectors in at least one of the non-intra pictures in the MPEG video signal; analyzing discrete cosine coefficients of at least one of the intra pictures in the MPEG video signal; or obtaining a sample picture from one or more of the plurality of channels containing no programming, storing information from the sample picture in memory, and comparing information from at least one of the intra pictures in the MPEG video signal with the stored information from the sample picture" as recited in claim 14.

That is, and for at least the same reasons provided in Sections A, H, J and M above, at least because Elenbaas and Barton, alone or in any allowable combination, fail to teach, suggest or make obvious at least a method and system for creating a subset of channels with programming from a plurality of channels including "encoding at least a portion of a predetermined number of channels from the plurality of channels to provide corresponding encoded intra and/or non-intra pictures for each of the predetermined number of channels" and "processing at least one of the corresponding intra and/or non-intra pictures for each of the predetermined number of channels to determine which of the predetermined number of channels contain programming" as taught in the Appellant's Specification and claimed in at least the Appellant's claims 10 and 13, the Appellant respectfully submits that Elenbaas and Barton, alone or in any allowable combination, also fail to teach, suggest or render obvious the Appellant's invention as claimed in dependent claim 14, which depends directly from claim 13 and indirectly from independent claim 10.

Therefore, the Appellant submits that claim 14, as it now stands, fully satisfies the requirements of 35 U.S.C. § 103 and is patentable thereunder.

O. 35 U.S.C. § 103(a) - Claim 15

Claim 15 depends directly from independent claim 10 and recites further limitations thereof. At least because teachings of Elenbaas and Barton, alone or in any allowable combination, fail to teach, suggest or make obvious the invention of the Appellant with regard to at least the Appellant's independent claim 10, the Appellant respectfully submits that dependent claim 15 is also not rendered obvious and is allowable for at least the reasons stated above with respect to independent claim 10. The Appellant further submits that Elenbaas and Barton, alone or in any allowable combination, also fail to teach, suggest or render obvious the Appellant's claim 10 further limited by "wherein the encoder encodes at least a portion of each of the plurality of channels to provide a corresponding encoded signal for each of the plurality of channels" as recited in claim 15.

That is, and for at least the same reasons provided in Sections A, H and J above, at least because Elenbaas and Barton, alone or in any allowable combination, fail to teach, suggest or make obvious at least a method and system for creating a subset of channels with programming from a plurality of channels including "encoding at least a portion of a predetermined number of channels from the plurality of channels to provide corresponding encoded intra and/or non-intra pictures for each of the predetermined number of channels" and "processing at least one of the corresponding intra and/or non-intra pictures for each of the predetermined number of channels to determine which of the predetermined number of channels contain programming" as taught in the Appellant's Specification and claimed in at least the Appellant's claims 1, 8 and 10, the Appellant respectfully submits that Elenbaas and Barton, alone or in any allowable combination, also fail to teach, suggest or render obvious the Appellant's invention as claimed in dependent claim 15, which depends directly from independent claim 10.

Therefore, the Appellant submits that claim 15, as it now stands, fully satisfies the requirements of 35 U.S.C. § 103 and is patentable thereunder.

P. 35 U.S.C. § 103(a) - Claim 16

Claim 16 is an independent claim that recites similar relevant features as recited in the Appellant's independent claims 1, 8 and 10. More specifically, claim 16 claims a system for creating a subset of channels with programming from a plurality of channels including an encoder for "encoding at least a portion of a predetermined number of channels from the plurality of channels to provide corresponding encoded intra and/or non-intra pictures for each of the predetermined number of channels" and a processor using at least an encoder to "process at least a portion of an audio signal in the predetermined number of channels from the plurality of channels wherein the processor determines which of the predetermined channels contain programming to provide a program channel subset containing at least audio and/or video".

As described in sections A, H and J above, the teachings of Elenbaas and Barton, alone or in any allowable combination, fail to teach, suggest or make obvious at least a method and system for creating a subset of channels with programming from a plurality of channels including "encoding at least a portion of a predetermined number of channels from the plurality of channels to provide corresponding encoded intra and/or non-intra pictures for each of the predetermined number of channels" and "processing at least one of the corresponding intra and/or non-intra pictures for each of the predetermined number of channels to determine which of the predetermined number of channels contain programming" as taught in the Appellant's Specification and claimed in at least the Appellant's claims 1, 8 and 10 and as similarly claimed in the Appellant's claim 16. That is, the Appellant respectfully submits that independent claim 16 is also not rendered obvious by Elenbaas and Barton, alone or in any allowable combination, and is allowable for at least the reasons stated above with respect to independent claims 1, 8 and 10.

Therefore, the Appellant submits that claim 16, as it now stands, fully satisfies the requirements of 35 U.S.C. § 103 and is patentable thereunder.

Q. 35 U.S.C. § 103(a) - Claim 17

Claim 17 depends directly from independent claim 16 and recites further limitations thereof. At least because teachings of Elenbaas and Barton, alone or in

any allowable combination, fail to teach, suggest or make obvious the invention of the Appellant with regard to at least the Appellant's independent claim 16, the Appellant respectfully submits that dependent claim 17 is also not rendered obvious and is allowable for at least the reasons stated above with respect to independent claim 16. The Appellant further submits that Elenbaas and Barton, alone or in any allowable combination, also fail to teach, suggest or render obvious the Appellant's claim 16 further limited by "wherein the subset of channels comprises a plurality of channel indicators for identifying the channels in the subset of channels" as recited in claim 17.

That is, and for at least the same reasons provided in Sections A, H, J and P above, at least because Elenbaas and Barton, alone or in any allowable combination, fail to teach, suggest or make obvious at least a method and system for creating a subset of channels with programming from a plurality of channels including "encoding at least a portion of a predetermined number of channels from the plurality of channels to provide corresponding encoded intra and/or non-intra pictures for each of the predetermined number of channels" and "processing at least one of the corresponding intra and/or non-intra pictures for each of the predetermined number of channels to determine which of the predetermined number of channels contain programming" as taught in the Appellant's Specification and claimed in at least the Appellant's claims 1, 8, 10 and 16, the Appellant respectfully submits that Elenbaas and Barton, alone or in any allowable combination, also fail to teach, suggest or render obvious the Appellant's invention as claimed in dependent claim 17, which depends directly from independent claim 16.

Therefore, the Appellant submits that claim 17, as it now stands, fully satisfies the requirements of 35 U.S.C. § 103 and is patentable thereunder.

Conclusion

Thus, the Appellant submits that none of the claims presently in the application are rendered obvious under the provisions of 35 U.S.C. § 103. Consequently, the Appellant believes all these claims are presently in condition for allowance.

For at least the reasons advanced above, the Appellant respectfully urges that the rejections of claims 1-17 as being rendered obvious under 35 U.S.C. §103 are improper. Reversal of the rejections in this Appeal is respectfully requested.

Respectfully submitted,

26 October '06
Date

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CLAIMS APPENDIX

1. (Previously Presented) A method of creating a subset of channels with programming from a plurality of channels, comprising the steps of:
 - receiving a plurality of channels, wherein the plurality of channels comprises at least one channel with programming;
 - encoding at least a portion of a predetermined number of channels from the plurality of channels to provide corresponding encoded intra and/or non-intra pictures for each of the predetermined number of channels;
 - processing at least one of the corresponding intra and/or non-intra pictures for each of the predetermined number of channels to determine which of the predetermined number of channels contain programming to provide the subset of channels with programming; and
 - storing the subset of channels into memory.
2. (Original) The method according to claim 1, further comprising the step of outputting channels exclusively corresponding to the subset of channels.
3. (Original) The method according to claim 1, further comprising the step of analyzing at least a portion of an audio signal in the predetermined channels to determine which of the predetermined number of channels contain programming.
4. (Original) The method according to claim 1, wherein each corresponding encoded signal is an MPEG video signal containing pictures selected from the group comprising intra pictures or non-intra pictures.
5. (Original) The method according to claim 4, wherein said processing step further comprises one or more of the steps selected from the group comprising:
 - counting a number of bits in at least one of the non-intra pictures in the MPEG video signal;
 - analyzing motion vectors in at least one of the non-intra pictures in the MPEG video signal;

analyzing discrete cosine coefficients of at least one of the intra pictures in the MPEG video signal; or

obtaining a sample picture from one or more of the plurality of channels containing no programming, storing information from the sample picture in memory, and comparing information from at least one of the intra pictures in the MPEG video signal with the stored information from the sample picture.

6. (Original) The method according to claim 1, wherein said encoding step further comprises the step of encoding at least a portion of each of the plurality of channels to provide the corresponding encoded signal for each of the plurality of channels.

7. (Original) The method according to claim 1, wherein the subset of channels comprises a plurality of channel indicators for identifying the channels in the subset of channels.

8. (Previously Presented) A method of creating a subset of channels with programming from a plurality of channels, comprising the steps of:

receiving a plurality of channels, wherein the plurality of channels comprises at least one channel with programming;

encoding at least a portion of a predetermined number of channels from the plurality of channels to provide corresponding encoded intra and/or non-intra pictures for each of the predetermined number of channels;

processing at least one of the corresponding encoded intra and/or non-intra pictures for each of the predetermined number of channels and a portion of a respective audio signal in the predetermined number of channels from the plurality of channels to determine which of the predetermined number of channels contain programming to provide a program channel subset; and

storing the program channel subset into memory.

9. (Original) The method according to claim 8, wherein the programming on the subset of channels contains video content.

10. (Previously Presented) A system for creating a subset of channel indicators for channels with programming from a plurality of channels, comprising:

- a receiver for receiving a plurality of channels, wherein the plurality of channels comprises at least one channel with programming;

- a video processor programmed to:

- encode at least a portion of a predetermined number of channels from the plurality of channels to provide corresponding encoded intra and/or non-intra pictures for each predetermined channel; and

- process at least one of the corresponding encoded intra and/or non-intra pictures for each of the predetermined number of channels to determine which of the predetermined number of channels contain programming to provide the subset of channel indicators; and
 - memory for storing the subset of channel indicators.

11. (Original) The system according to claim 10, wherein the system presents channels corresponding only to the subset of channel indicators stored in memory.

12. (Original) The system according to claim 10, further comprising an audio detection circuit for analyzing at least a portion of an audio signal in the predetermined channels to determine which of the predetermined number of channels contain programming.

13. (Original) The system according to claim 10, wherein each encoded signal is an MPEG video signal containing pictures selected from the group comprising intra pictures or non-intra pictures.

14. (Original) The system according to claim 13, wherein the video processor is further programmed to perform one or more of the steps selected from the group comprising:

- counting a number of bits in at least one of the non-intra pictures in the MPEG video signal;

- analyzing motion vectors in at least one of the non-intra pictures in the MPEG video signal;

- analyzing discrete cosine coefficients of at least one of the intra pictures in the MPEG video signal; or

- obtaining a sample picture from one or more of the plurality of channels containing no programming, storing information from the sample picture in memory, and comparing information from at least one of the intra pictures in the MPEG video signal with the stored information from the sample picture.

15. (Original) The system according to claim 10, wherein the encoder encodes at least a portion of each of the plurality of channels to provide a corresponding encoded signal for each of the plurality of channels.

16. (Previously Presented) A system for creating a subset of channels with programming from a plurality of channels, comprising:

- a receiver for receiving a plurality of channels, wherein the plurality of channels comprises at least one channel with programming including video and audio;

- an encoder for encoding at least a portion of a predetermined number of channels from the plurality of channels to provide corresponding encoded intra and/or non-intra pictures for each of the predetermined number of channels;

- a processor using at least one of the encoder and an audio detection circuit to process at least a portion of an audio signal in the predetermined number of channels from the plurality of channels, wherein the processor determines which of

the predetermined number of channels contain programming to provide a program channel subset containing at least audio and/or video; and
memory for storing the program channel subset.

17. (Original) The system according to claim 10, wherein the subset of channels comprises a plurality of channel indicators for identifying the channels in the subset of channels.

EVIDENCE APPENDIX

Appellant asserts that there is no evidence to be submitted in accordance with this section.

RELATED PROCEEDINGS APPENDIX

Appellant asserts that there are no copies of decisions to be submitted in accordance with this section.